FIRE FIGHTING TRAINING UNIT

WORK PLAN FOR LIMITED DEMOLITION SERVICES FIRE FIGHTING TRAINING UNIT

NAVAL TRAINING CENTER GREAT LAKES, ILLINOIS

June 1997

Prepared by:

BELING CONSULTANTS
UNDER CONTRACT #N68950-95-D-9021

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1.0 INTRODUCTION AND OBJECTIVES

This Work Plan has been prepared in accordance with Contract #N68950-95-D-9021 between Beling Consultants (Beling) and the Department of Navy, Great Lakes Naval Training Center, Great Lakes, Illinois. This Plan describes activities scheduled as part of the demolition of the Fire Fighting Training Unit (FFTU) at Naval Training Center, Great Lakes, Illinois. This Plan is intended to provide information regarding the Scope of Work, sequence of activities, responsibilities, performance expectations and time schedules. It is not intended to serve as a bidding specification, and as such, does not specify quantities, ways and means for engineering or contractor requirements, nor detailed material requirements.

Refer to Figure 1, Site Plan and Piping Layout, which provides the layout of surface features associated with the former fire fighting activities, and the layout of underground piping for pressurized fuel delivery systems, pressurized water delivery systems, and drainageway piping. Seaman recruits were formerly trained at this facility to fight fires fueled by the fuel oil pipes, and controlled with water from the water pipes. The drainageway piping accommodated runoff from the activities. Surface structures with the exception of Building 3304 and three (3) aboveground storage tanks (ASTs) have been removed. Removal of the underground piping is scheduled for July and August 1997.

The activities included in this Plan are scheduled for completion prior to removal of subsurface piping.

a) installation of site erosion control measures;
b) demolition and removal of subsurface structures associated with the former oil/water separator system (Duplex Separator, Figures 1 & 3);

c) modification to drainageway piping;

d) removal of three aboveground storage tanks (ASTs), and

e) removal of one underground storage tank (UST).

The former oil/water separator is the site of accumulated sludge, waste water, and stormwater in concrete vaults and pits. The accumulated materials are to be containerized by a contractor (the Contractor) prior to removal of the concrete subsurface structures. The Contractor will excavate a stormwater collection pit, referred to herein as a temporary retention basin, to intercept drainage from the underground piping and overland run-off, should it occur.

Beling will provide technical oversight for material containment, implementation of the Stormwater Management Plan, and documentation of field activities during demolition activities.

The activities in this Work Plan prepare the site for excavation and removal of approximately 21,600 linear feet of underground piping. The activities in this plan are designed to:

- remove the contaminated sludge, waste water and stormwater and the concrete substructures (refer again to Figure 1) associated with the former oil/water separator system.

- minimize the overland flow of contaminants in stormwater through use of silt fences and the construction of a retention basin.

- minimize the off-site migration of contaminants by removing pipes plumbed into and out of the former decant ponds.

- maintain stormwater discharge from the perimeter ditch to Skokie Creek.

- remove the three remaining ASTs at the site.

- remove the 5,000 gallon fuel oil USTs near the southeast entryway to the site.

This Work Plan includes a description of specific demolition activities and the Contractor's requirements for containment and disposal of materials, including wastes. The Contractor is required to have a site-specific Health & Safety Plan, be familiar with Beling's site-specific Health & Safety Plan, and follow the Stormwater Pollution Prevention Plan specific for this remediation project. Documents related to this Work Plan are referenced in the Table of Contents, and have been made available to the Contractor, IEPA, and USEPA.

2.0 SITE DESCRIPTION

The FFTU site comprises approximately 8.5 acres. The condition of the site is flat with concrete, gravel, and asphalt surfaces, with grassy vegetated areas around the perimeter ditch. A perimeter ditch on the east and north sides of the site discharges to a culvert noted on the Figure 1 as culvert X. A wetland is present in the ditch at the northwest corner of the site. Contractor is not to disturb the wetland area. All buildings and surface structures, except Building 3304 and the ASTs have been razed.

Based on a review of existing information, there are approximately 21,600 linear feet of underground piping (7,300 feet of gas/oil/vent pipes; 5,400 feet of water supply pipes; and 8,900 feet of drain pipes). The exact locations of the

underground pipes and subsurface structures has not been field verified, however, general locations of the field piping have been correlated to the site map using a dipolar utility locator.

Underground drainage from the site discharges to Skokie Creek. The storm sewer is to be preserved, because it facilitates drainage from the perimeter drainage ditch and wetland area. The ditch also collects surface runoff from the adjacent golf course and areas outside of the subject site. The subsurface drainage pipe system at the FFTU site including pipes from the decant ponds will be disconnected from the storm sewer. The storm sewer will be patched and preserved as necessary.

Activities at the site are regulated by IEPA under its Leaking Underground Storage Tank (LUST) rules because of the fuel piping and former USTs, and by USEPA Region V due to the potentially hazardous concentrations of CERCLA compounds associated with combustion of fuels.

Precautions will be taken by the Contractor and Beling in accordance with the site safety plans to minimize risk of exposure to LUST and CERCLA regulated soils, sludge, and accumulated stormwater and waste waters.

Free phase fuel oil may be encountered during excavating activities. The Contractor is required to collect, containerize, and dispose free product encountered.

3.0 DEMOLITION TASKS

3.1 REMOVE ABOVEGROUND STORAGE TANK

The Contractor is responsible to containerize all liquid contents from three (3) ASTs at the site, and clean the ASTs. After the tanks are cleaned, the Contractor will be responsible for disposal of the wash water or solids generated by tank cleaning activities. The Contractor will also be responsible to demolish and properly dispose of the tanks. The Contractor will remove and properly dispose of concrete slabs and cradles, pipes, dikes, signage, and accessory items from each AST.

3.2 INSTALL SILT AND CONSTRUCTION FENCES

In accordance with the Erosion Control Plan and Figure 2, Erosion Control Map, the Contractor will erect a silt fence to minimize the migration of waterborne contaminants from the site. The silt fence is intended to protect the perimeter drainage ditch along the north and east borders of the site and to prevent surface run-off towards the south and west borders of the site. Silt fences shall also be installed as indicated on Figure 2 to prevent pollutants and solids from entering into the subsurface drainageway piping.

The erosion control plan also requires installation of a construction fence around the perimeter of the site. The construction fence will be an "orange snow-fence" type affixed to fence posts set in the ground. Appropriate signage shall be posted along the construction fence by the Contractor.

3.3 - PREPARE EXCAVATION AREA

The Contractor will remove approximately 80 linear feet of chain link fence which currently separates the area containing the drainage related subsurface structures and the decant ponds. The fence must be removed to facilitate excavation work around the area of the former oil/water separator system. The Contractor will set-up two (2) 5,000 gallon Baker tanks, provided by the Navy, in a location convenient to the former oil/water separator. Additional tanks, if needed for on-site storage of liquid or sludge wastes, will be provided by the Contractor.

3.4 - PREPARE LAYDOWN AREAS AND DECONTAMINATION AREAS

The Contractor shall establish two Laydown areas for piping and associated demolition debris. The first one, the LUST Pipe Laydown area, will be approximately 40' x 40' located near the entrance to the site, at the southeast corner as indicated on Figure 1. The Contractor will clear and grub the area. A decontamination area will be constructed underneath the LUST laydown area for decontamination of equipment, people, and demolition materials, as necessary. The Contractor will utilize this Laydown area for stockpiling and decontamination of AST parts and pipes which require LUST decontamination. The decontamination area will be constructed big enough to decon heavy equipment and vehicles beneath the LUST pipe laydown area. It will consist of a plastic liner, six inches of gravel, a pressure washer, and sump. Decon waters will be collected and containerized by the Contractor. The Contractor is responsible for disposal of the metal scrap material and disposal of the containerized decon water.

The second laydown area shall be for USEPA Regulated piping (refer again to Figure 1). The Contractor will cut and dispose of metal pipe railings to prepare the

area on concrete next to the golf course's cart storage building. This Laydown area will be approximately 60 feet by 40 feet. All surface run-on and run-off will be collected by the Contractor. Stockpiled materials will be covered with polyethylene sheeting pending decontamination, analytical evaluation, and disposal or reuse. The Contractor will be responsible for chemical analyses to profile all wastes stored in this area prior to disposal. This area will be lined with 2-ply, 10-mm, polyethylene sheeting or equivalent. Materials to be stockpiled in this area include drainageway piping, and demolition debris from excavation of the subsurface structures.

3.5 - DEMOLISH OIL WATER SEPARATOR SYSTEM AND RELATED SUBSURFACE STRUCTURES

The Contractor will transfer the contents of the sludge separators, subsurface vaults and drainage pits, all in the vicinity of the former oil/water separator, to the Baker tanks. The structures are to be empty prior to demolition. Solids and sludge when encountered, may be drummed. Additional tanks for on-site storage will be provided by the Contractor, if necessary. The Contractor will sample and analyze the contents of the Baker tanks and the drums to profile the wastes for disposal. The Contractor is responsible for proper disposal of all wastes.

Refer to Figure 3, Drainage Modification Detail, for the excavation area and the location of the following drainage related subsurface structures to be removed:

Former "Smothering Pit"
"Duplex Separator"
"Former Separator Pit"

"Overfill Tanks"

"Concrete Vault"

"Valve Pit"

"Manhole "D" "

The Contractor will remove, demolish, decontaminate, and dispose of the designated subsurface structures with technical oversight assistance provided by Beling. The Contractor will also cut, remove, decontaminate, and dispose all connecting drainage pipes within the limits of the excavation and between and around the two decant ponds.

During demolition of the substructures provided on Figure 3, groundwater may enter the excavation. If temporary dewatering is necessary to remove the concrete structures, which may extend ten or more feet below grade, the Contractor may pump groundwater to the former decant pond. The Contractor will use its equipment to assist Beling in the collection of soil samples from beneath the removed subsurface structures. Refer to the Soil Sampling and Analysis Plan for Demolition of Subsurface structures for protocols and parameters for soil sampling.

3.6 - SITE DRAINAGE

Storm water pipes from the golf course cart storage area will not be altered and will continue to drain into Manhole "A" (refer to Figure 1 and 3). Drainage from the perimeter drainage ditch along the north and east borders of the site will continue to flow through Culvert "X" and Manholes "A", "B", and "C" toward Skokie Ditch. The Contractor will maintain Culvert "X" and Manholes "A", "B" and "C" to ensure that storm water drainage passes through the site.

Three (3) pipes, a 12" vitreous tile from the north, an 8" cast iron pipe from the east, and an 8" cast iron pipe from the south currently discharge to the smothering pit and associated pits/tanks which are hydraulically connected to the smothering pit. These pipes are to be drained until empty into a temporary retention basin created in the demolition excavations of the smothering pit, duplex separator and separator pit, et. al. Refer to Figure 2 of 3 in this Work Plan. It is intended that the drainage system be temporary until the drainageway pipes are plugged and/or removed. Evaluation of drainage from the pipes may result in a field decision to plug the open-ended drainage pipes, pending their removal. The site will be restored to grade under a separate work plan pursuant to the Stormwater Pollution Prevention Plan.

In the event that the quality of containerized water meets discharge requirements, the water will be discharged into the storm sewer manholes A, B, or C in accordance with the Stormwater Pollution Prevention Plan and the Lake County Watershed Ordinance. If temporary storage of accumulated water sludge exceeds the capacity of the Baker tanks provided by the Navy, the Contractor will provide additional tanks.

3.7 - REMOVE UNDERGROUND STORAGE TANK

The Contractor shall apply for a permit to remove the 5,000 gallon underground diesel storage tank located at the southeast corner of the site. After securing proper notice to proceed from the Office of the State Fire Marshal (OSFM), the Contractor will transfer the contents of the underground storage tank into a Baker tank. Sludges from the tank may be drummed pending disposal. Rinsate water generated during cleaning of the underground storage tank will be collected by the Contractor, characterized, and disposed as appropriate.

The Contractor will remove the underground storage tank in accordance with applicable Fire Marshal regulations. Site observations and sampling beneath the UST will be documented by Beling.

4.0 WASTE PROFILES

The Contractor will be responsible to perform waste profiles by collecting samples of drummed materials, oily water in Tanks, decon water, materials on or in pipes, concrete rubble and other materials prior to disposal.

Toxic Characteristic Leaching Procedure (TCLP) analysis will be required to determine if a waste is hazardous. The Contractor is responsible to handle and dispose hazardous wastes, if encountered, in accordance with Federal and State regulations.

The Contractor is responsible to handle and dispose of materials classified as special wastes in accordance with Federal and State regulations. The Contractor will provide options and price estimates to the Navy for disposal of wastes. The Navy will direct the Contractor to proceed with an appropriate disposal procedure for demolition wastes.

5.0 ORGANIZATION AND SCHEDULE

The Navy's Engineer in Charge throughout demolition tasks at FFTU will be J.P. Messier with an alternate, Terry Aide. Their offices are located at the Great lakes Naval Base, within five miles of the FFTU site. They can be reached at (847) 688-4198 or 5997.

Beling's Manager of Field Operations for this project is Phil Ramos, who will be present on site to provide technical oversight and to document demolition activities. He will coordinate daily demolition tasks, with the Contractor and the Engineer in Charge. He will report to Beling's Project Manager, Molly Arp, who reports to the Navy's Engineer in Charge and Contracting Officer. Phil Ramos may be reached on site or at (312) 986-0390. Molly Arp may be reached on site or at (309) 757-9849.

The Contractor will be Heritage Environmental Services, Inc. based in Romeoville, Illinois. Heritage has been authorized directly by the Navy to perform demolition tasks described in this Work Plan. Project Managers for Heritage include Kevin J. Reinhard and Geoffrey A. Langley. They can be reached on site or at (630) 378-1600.

Demolition of ASTs is schedule to begin July 7, 1997. Preparation of decon areas and installation of silt fences is also planned for July 7. These tasks are expected to require 3 or 5 days.

Demolition of the subsurface structures in the vicinity of the oil water separator is scheduled to begin July 14, 1997. It is expected to require less than two weeks. Removal of the UST will take place after the Illinois OSFM issues a permit. Estimated removal date: August 4, 1997.

BP	SUMP PIT (Backfilled)
CT	CHEMTAKE TREE ENCLOSURE (Removed)
WS/S	WATER SUMP (Removed)
⋈	GATE VALVE (Removed)
◇	CONTROL TOWER (Removed)
CP	CONTROL PANEL WITH MULTIPLE CONNECTIONS TO SPRINKLERS
●	CATCH BASIN
O	CLEANOUT
MH●	MANHOLE
▩	INLET
▩	UNDERGROUND STORAGE TANKS
▨	APPROXIMATE AREA OF JURISDICTIONAL WETLANDS.
⊢⊣	CHAIN LINK FENCE
[ ]	INDICATES STRUCTURE HAS BEEN REMOVED.
CMP	CORRUGATED METAL PIPE
MP	SMOOTH METAL PIPE
RCP	REINFORCED CONCRETE PIPE

WILLOW GLEN
GOLF COURSE

EXISTING CULVERT

SKOKIE DITCH

WILLOW GLEN
GOLF COURSE

APPROXIMATE LOCATION OF
EXISTING ±2' HIGH EARTHEN BERM

WILLOW GLEN
GOLF COURSE

EXISTING PERIMETER CHAIN LINK FENCE

EXISTING PERIMETER
DITCH (TYP.)

EXISTING
PIPE

EXISTING
10" CMP

EXISTING DAM STRUCTURE

EXISTING 24" CMP

POND

CULVERT

ABOVE GROUND STORAGE
TANK WITH DISPENSER

DRAINAGE DITCH

GRASS

DRAINAGE DITCH

EXISTING 15"

NORTH
DECANT
POND

SOUTH
DECANT
POND

FORMER
CARRIER
COMPARTMENTS

LOCATION OF 1,500 GALLON
GASOLINE STORAGE TANK

LOCATION OF 2,500
GALLON OIL STORAGE TANK

2,500 GALLON UNDERGROUND
OIL STORAGE TANK

VALVE PIT

SMOTHERING PIT

EXISTING 10" MP

EXISTING 42" RCP
FROM GOLF COURSE

VAULT

DUPLEX
SEPARATOR

OVERFILL TANK

SEPARATOR
PIT

MANHOLE "A"

MANHOLE "B"

MANHOLE "C"

MANHOLE "D"

SERVICE ROAD

1,500 GALLON UNDERGROUND
GASOLINE STORAGE TANKS

2,500 GALLON UNDERGROUND
OIL STORAGE TANKS

FORMER
SLUDGE
PIT

GRASS

STORAGE BUILDING

5,000 GALLON UNDERGROUND
GASOLINE STORAGE TANK

EXISTING 6" TILE

5,000 GALLON UNDERGROUND
DIESEL STORAGE TANK

2 ABOVEGROUND STORAGE TANKS

APPROXIMATE LOCATION
OF AGGREGATE DRIVE

FORMER GAS AND OIL FILLBOX

MAIN WATER
SERVICE
TO REMAIN

BOILER
ROOM

TRANSFORMERS ON
CONCRETE PAD

HYDRANT

DECONTAMINATION AREA AND
DUST PIPE LAYDOWN AREA
(APPROXIMATELY 40'X40')

GRASS

USEPA REGULATED
MATERIAL LAYDOWN AREA
(APPROXIMATELY 40'X60')

3304
ADMINISTRATION BUILDING

GRASS

GRASS

GRASS

CART STORAGE

GRASS

EXIT

ENTRANCE TO
PROJECT SITE

WILLOW GLEN
GOLF COURSE
DRIVING RANGE

REV.	DATE	REMARKS

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DESIGNED,	P.A. RAMOS
DRAWN,	A.A. BROWN
CHECKED,	M.A. ARP

50' 0 25' 50' 100'
Horizontal Scale: 1" 50'

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ENVIRONMENTAL REMEDIATION OF THE
FIREFIGHTING TRAINING UNIT (FFTU)

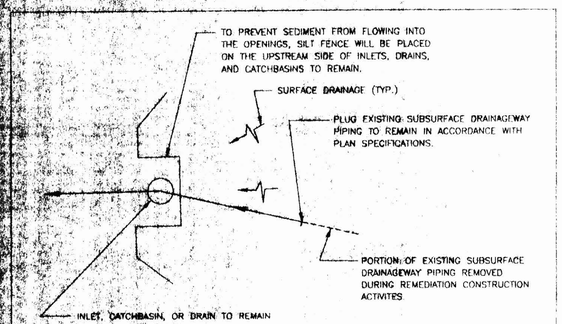
SITE MAP AND PIPING LAYOUT

WORKPLAN FOR LIMITED DEMOLITION SERVICES

SHEET, 1 OF 3

JOB NUMBER, 29879

DATE, JUNE 30TH, 1997

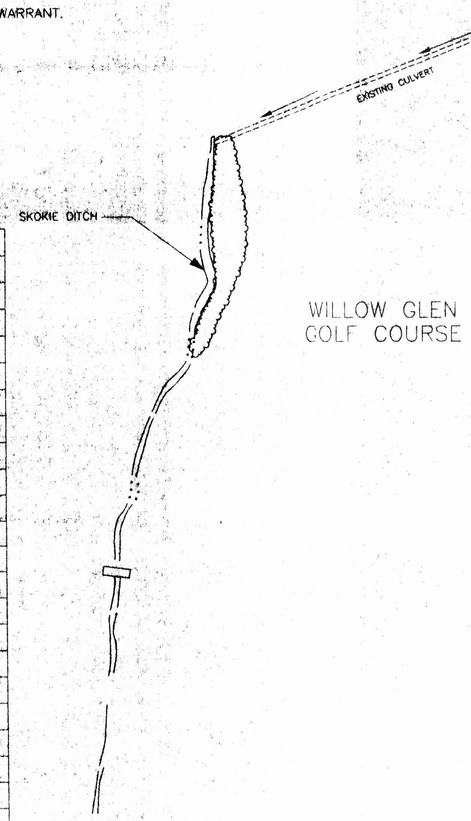


TYPICAL DETAIL FOR INLET, CATCHBASIN, AND DRAIN PROTECTION (WHEN CONSTRUCTION IS UPSTREAM)

NOT TO SCALE

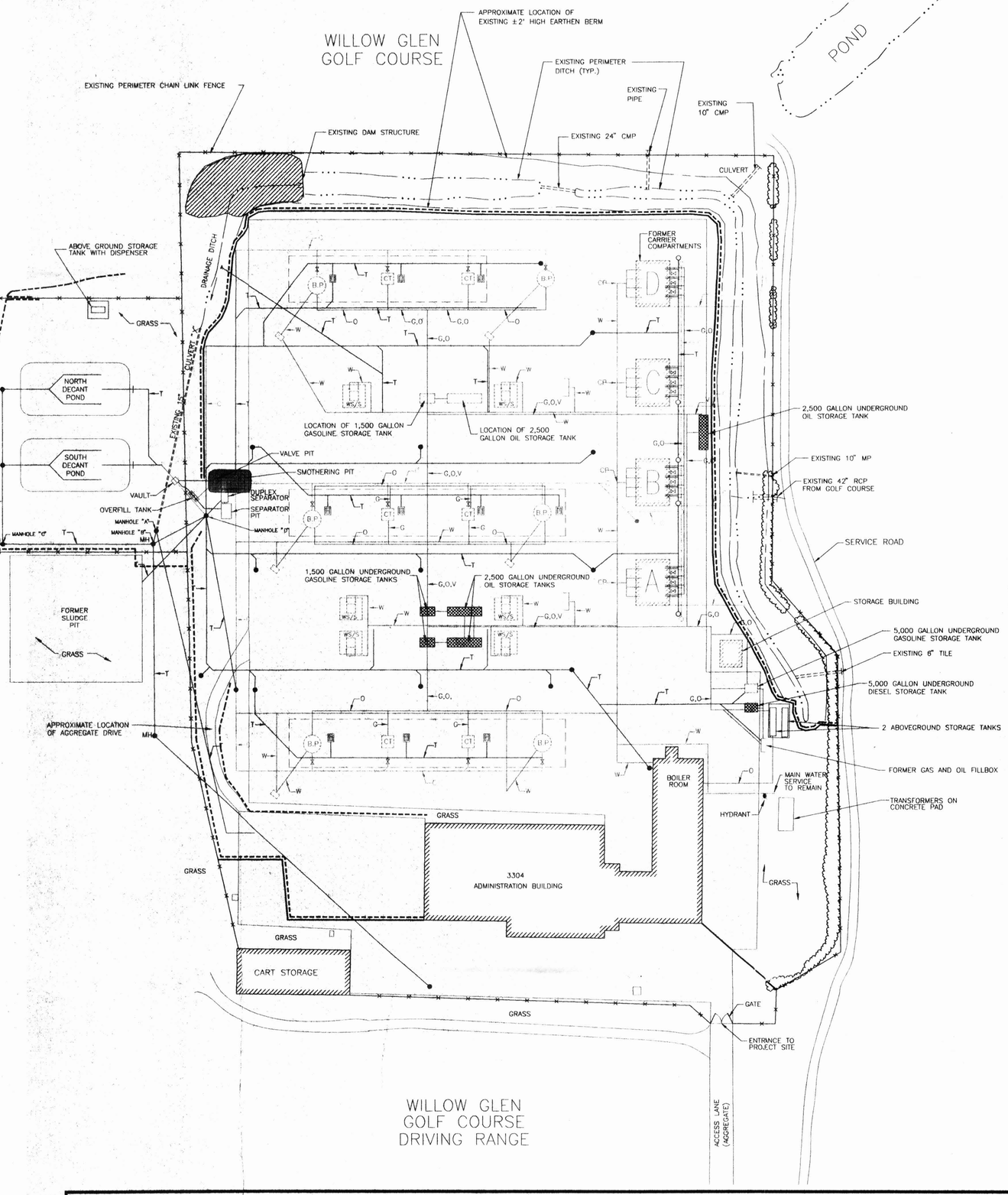
NOTES:

1. LOCATIONS OF SILT CONTROL SHOWN ON THIS PLAN REPRESENT THE GENERAL VICINITY OF PLACEMENT. THE SILT CONTROL WILL BE PLACED IN THE APPROPRIATE LOCATIONS FOR BEST EROSION AND SEDIMENT CONTROL PROTECTION.
2. ALL INLETS, CATCHBASINS, AND DRAINS WHICH ARE DOWNSTREAM FROM CONSTRUCTION ACTIVITIES WILL BE PROTECTED FROM SEDIMENT INFILTERATION PER DETAIL SHOWN ON THIS SHEET.
3. THIS PLAN SHOWS MINIMUM PLACEMENT OF EROSION CONTROL. ADDITIONAL EROSION CONTROL PROTECTION WILL BE PROVIDED AS CONDITIONS/AGENCIES WARRANT.



LEGEND

W	WATER PIPES
	CAST IRON DRAIN PIPES
	NON-METALLIC CLAY TILE DRAIN PIPES
G	G = GAS SUPPLY PIPE
O	O = OIL SUPPLY PIPE
V	V = VENT PIPE
B.P.	BURN PIT (Removed)
C.T.	CHRISTMAS TREE ENCLOSURE (Removed)
W.S./S.	WATER SUMP (Removed)
G.V.	GATE VALVE (Removed)
	CONTROL TOWER (Removed)
C.P.	CONTROL PANEL WITH MULTIPLE CONNECTIONS TO SPRINKLERS
	CATCH BASIN
C.O.	CLEANOUT
M.H.	MANHOLE
	INLET
	UNDERGROUND STORAGE TANKS
	APPROXIMATE AREA OF JURISDICTIONAL WETLANDS
	CHAIN LINK FENCE
	INDICATES STRUCTURE HAS BEEN REMOVED.
	SILT FENCE
	CONSTRUCTION FENCE
	LOCATION OF TEMPORARY RETENTION POND
CMP	CORRUGATED METAL PIPE
SMP	SMOOTH METAL PIPE
RCP	REINFORCED CONCRETE PIPE



REV.	DATE	REMARKS

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ENVIRONMENTAL REMEDIATION OF THE FIREFIGHTING TRAINING UNIT (FFTU)

EROSION CONTROL MAP

WORKPLAN FOR LIMITED DEMOLITION SERVICES

SHEET, 2 OF 3

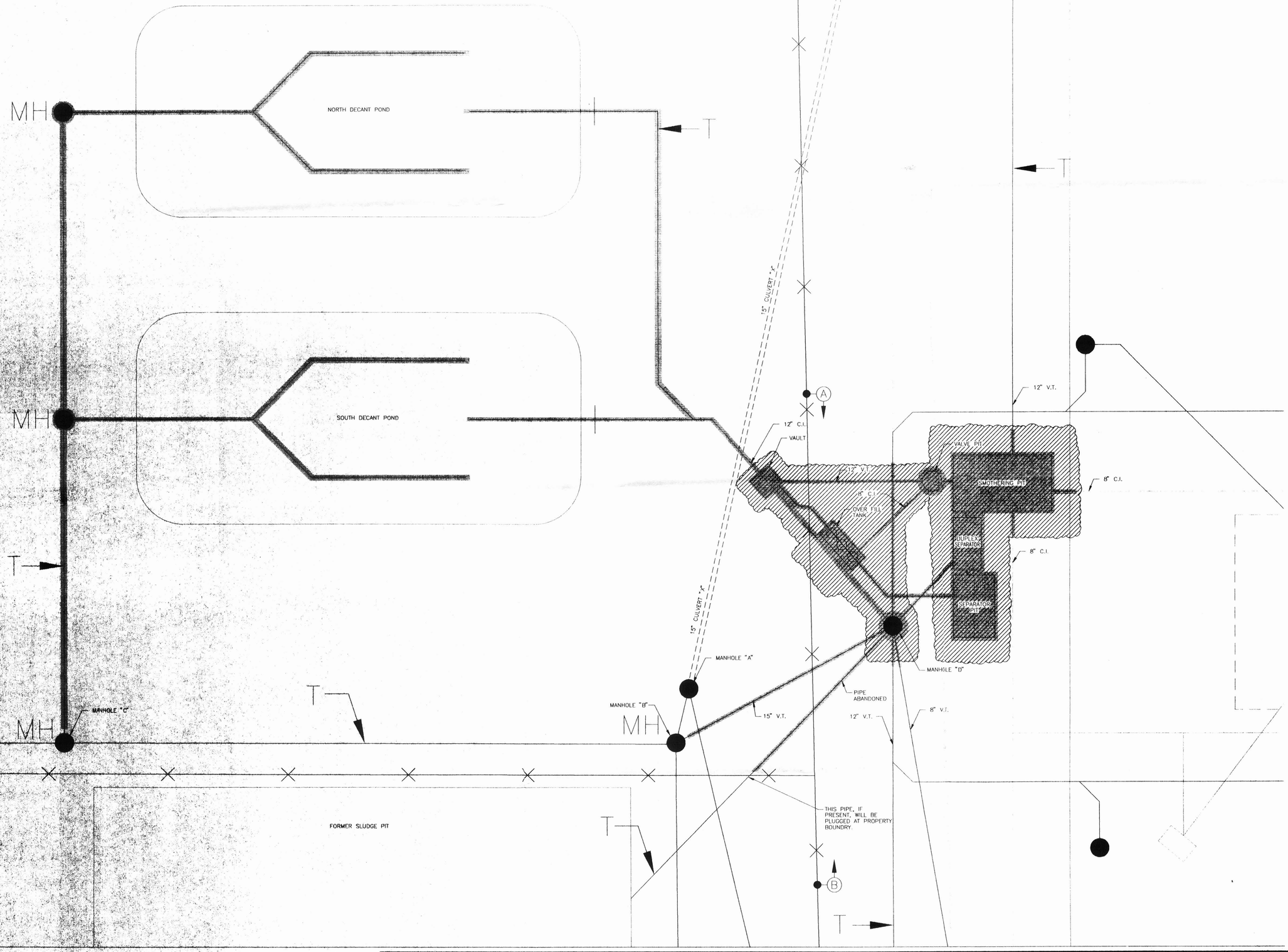
JOB NUMBER, 29879

DATE, JUNE 30TH, 1997

LEGEND

W	WATER PIPES
C	CAST IRON DRAIN PIPES
T	NON-METALLIC CLAY TILE DRAIN PIPES
G	G = GAS SUPPLY PIPE
O	O = OIL SUPPLY PIPE
V	V = VENT PIPE
B.P.	BURN PIT (Removed)
C.T.	CHRISTMAS TREE ENCLOSURE (Removed)
WS/S	WATER SUMP (Removed)
⋈	GATE VALVE (Removed)
◇	CONTROL TOWER (Removed)
C.P.	CONTROL PANEL WITH MULTIPLE CONNECTIONS TO SPRINKLERS
●	CATCH BASIN
O	CLEANOUT
MH●	MANHOLE
▣	INLET
▩	UNDERGROUND STORAGE TANKS
—x—x—	CHAIN LINK FENCE
L	INDICATES STRUCTURE HAS BEEN REMOVED.
▨	LIMITS OF EXCAVATION
▬	DRAINAGE PIPES & SUBSURFACE STRUCTURES TO BE REMOVED

NOTE:
CONTRACTOR: TO REMOVE EXISTING FENCE BETWEEN POINTS Ⓐ AND Ⓑ



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NAVAL TRAINING CENTER
GREAT LAKES, ILLINOIS

ENVIRONMENTAL REMEDIATION OF THE FIREFIGHTING TRAINING UNIT (FFTU)

DRAINAGE MODIFICATION DETAILS

WORKPLAN FOR LIMITED DEMOLITION SERVICES

SHEET: 3 OF 3
JOB NUMBER: 29879
DATE: JUNE 30TH, 1997

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